This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1-19. (canceled)

20. (currently amended) ~~The method of Claim 17~~ A method for imaging a pulmonary embolus comprising the steps of:

a. localizing a radiolabelled compound at the pulmonary embolus;

b. acquiring image slices representing the concentration of radioactivity within the radiolabelled pulmonary embolus;

c. assembling the image slices into a three-dimensional matrix of data;

d. scanning the three-dimensional matrix of data along an array of parallel lines to determine a maximum value along each line; and

e. assigning the maximum value along each line to a pixel in a two-dimensional array, the position of the pixel corresponding to the position of the line in the array of parallel lines;

wherein the localization step comprises the step of localizing a compound of the formula (I), and pharmaceutically acceptable salts thereof, at the ~~thrombus~~ pulmonary embolus:

$$|(Q)d'\text{-}L_n\text{-}C_{h'}|\,x\text{-}M_T(A_{L1})y(A_{L2})z$$

(I),

wherein,

Q is a glycoprotein IIb/IIIa binding compound;

d' is 1 - 20;

Ln is a linking group of formula:

M^1-[$Y^1(CR^{55}R^{56})_f(Z^1)_{f'}Y^2]_{f'}$-$M^2$,

wherein:

M^1 is -[$(CH_2)_gZ^1]_{g'}$-$(CR^{55}R^{56})_{g''}$-;

M^2 is -$(CR^{55}R^{56})_{g''}$-[$Z^1(CH_2)_g]_{g'}$-;

g is 0~~independently 0-10~~;

g' is 0~~independently 0-1~~;

g" is 0~~independently 0-10~~;

f is 0~~independently 0-10~~;

f' is independently 0-10;

f" is independently 0-1;

~~Y^1 and Y^2, are independently selected at each occurrence from: a bond, O, NR^{56}, C=O, C(=O)O, OC(=O)O, C(=O)NH-, $C=NR^{56}$, S, SO, SO_2, SO_3, NHC(=O), $(NH)_2C(=O)$, and $(NH)_2C=S$;~~

Y^1 is a bond;

Y^2 is NHC(=O);

Z^1 is independently selected at each occurrence from a C6-C14 saturated, partially saturated, or aromatic carbocyclic ring system, substituted with 0-4 R^{57}; and a heterocyclic ring system, substituted with 0-4 R^{57};

R^{55} and R^{56} are independently selected at each occurrence from: hydrogen; C1-C10 alkyl substituted with 0-5 R^{57}; and alkaryl wherein the aryl is substituted with 0-5 R^{57};

R^{57} is independently selected at each occurrence from the group: hydrogen, OH, NHR^{58}, $C(=O)R^{58}$, $OC(=O)R^{58}$, $OC(=O)OR^{58}$, $C(=O)OR^{58}$, $C(=O)NR^{58}$, C≡N, SR^{58}, SOR^{58}, $SO2R^{58}$, $NHC(=O)R^{58}$, $NHC(=O)NHR^{58}$, $NHC(=S)NHR^{58}$; or, alternatively, when attached to an additional molecule Q, R^{57} is independently selected at each occurrence from the group: O, NR^{58}, C=O, C(=O)O, OC(=O)O, C(=O)N-, $C=NR^{58}$, S, SO, SO2, SO3, NHC(=O), (NH)2C(=O), (NH)2C=S; and,

R^{58} is independently selected at each occurrence from the group: hydrogen; C1-C6 alkyl; benzyl, and phenyl;

M_T is a transition metal radionuclide;

$C_{h'}$ is a radionuclide metal chelator or bonding unit bound to the transition metal radionuclide of the formula $R^{40}R^{41}N\text{-}N=$ ~~, $R^{40}N=$, or $R^{40}N=N(H)$ selected from the group consisting of: $R^{40}N=N^{+}=$, $R^{40}R^{41}N\text{-}N=$, $R^{40}N=$, or $R^{40}N=N(H)$~~;

R^{40} is a heterocycle substituted with 1 R^{52} ~~independently selected at each occurrence from the group: a bond to L_n, C_1-C_{10} alkyl substituted with 0-3 R^{52}, aryl substituted with 0-3 R^{52}, cycloaklyl substituted with 0-3 R^{52}, heterocycle substituted with 0-3 R^{52}, heterocycloalkyl substituted with 0-3 R^{52}, aralkyl substituted with 0-3 R^{52} and alkaryl substituted with 0-3 R^{52}~~;

R^{41} is independently selected from the group: hydrogen, aryl substituted with 0-3 R^{52}, C_1-C_{10} alkyl substituted with 0-3 R^{52}, and a heterocycle substituted with 0-3 R^{52};

R^{52} is ~~independently selected at each occurrence from the group:~~ a bond to L_n, ~~=O, F, Cl, Br, I, CF_3, CN, CO_2R^{53}, $C(=O)R^{53}$, $C(=O)N(R^{53})_2$, CHO, CH_2OR^{53}, $OC(=O)R^{53}$, $OC(=O)OR^{53a}$, OR^{53}, $OC(=O)N(R^{53})_2$, $NR^{53}C(=O)R^{53}$, $NR^{54}C(=O)OR^{53a}$, $NR^{53}C(=O)N(R^{53})_2$, $NR^{54}SO_2N(R^{53})_2$, $NR^{54}SO_2R^{53a}$, SO_3H, SO_2R^{53a}, SR^{53}, $S(=O)R^{53a}$, $SO_2N(R^{53})_2$, $N(R^{53})_2$, $NHC(=NH)NHR^{53}$, $C(=NH)NHR^{53}$, $=NOR^{53}$, NO_2, $C(=O)NHOR^{53}$, $C(=O)NHNR^{53}R^{53a}$, OCH_2CO_2H, 2-(1-morpholino)ethoxy~~;

~~R^{53}, R^{53a}, and R^{54} are each independently selected at each occurrence from the group: hydrogen, C1-C6 alkyl, and a bond to Ln;~~

A_{L1} is a first ligand wherein each of the y first ligands are ~~selected from the group consisting of: dioxygen ligands,~~ functionalized aminocarboxylates~~, halides, and combinations thereof~~;

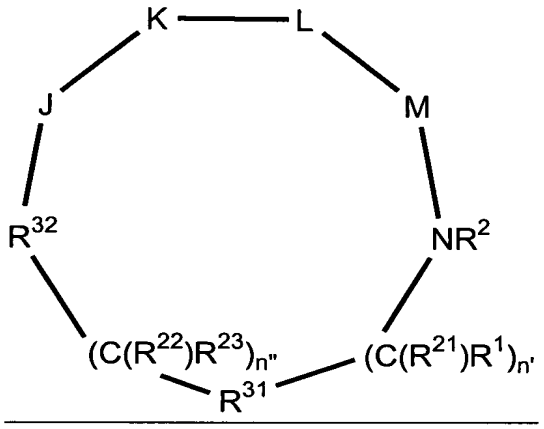
A_{L2} is a second ligand wherein each of the z second ligands are ~~selected from the group consisting of:~~ trisubstituted phosphines~~, trisubstituted arsines, tetrasubstituted diphosphines, tetrasubstituted diarsines, and combinations thereof~~;

x is independently 1-2;

y is independently 1-2; [and]

z is independently 0-4; and

wherein Q is of the formula (II),



(II)

or a pharmaceutically acceptable salt or prodrug form thereof wherein:

R^{31} is a C6-C14 aromatic carbocyclic ring system substituted with 1 R^{10};

R^{10} is $-NR^{13}C(=O)R^{13}$;

J is an L-isomer or D-isomer amino acid of structure

$-N(R^3)C(R^4)(R^5)C(=O)-$, wherein:

R^3 is H or C1-C8 alkyl;

R^4 is H or C1-C3 alkyl;

R^5 is selected from:

hydrogen;

C1-C8 alkyl substituted with 0-2 R^{11};

C2-C8 alkenyl substituted with 0-2 R^{11};

C2-C8 alkynyl substituted with 0-2 R^{11};

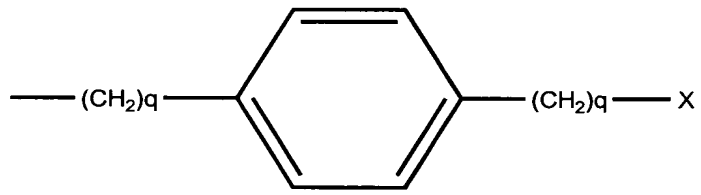
C3-C10 cycloalkyl substituted with 0-2 R^{11};

aryl substituted with 0-2 R^{12};

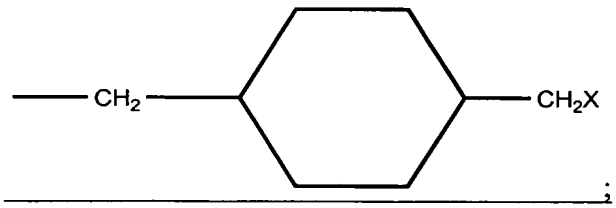
a 5-10-membered heterocyclic ring system containing 1-4 heteroatoms independently selected from N, S, or O, said heterocyclic ring being substituted with 0-2 R^{12};

=O, F, Cl, Br, I, -CF_3, -CN, -CO_2R^{13}, -$C(=O)R^{13}$, -$C(=O)N(R^{13})_2$, -CHO, -CH_2OR^{13}, -$OC(=O)R^{13}$, -$OC(=O)OR^{13a}$, -OR^{13}, -$OC(=O)N(R^{13})_2$, -$NR^{13}C(=O)R^{13}$, -$NR^{14}C(=O)OR^{13a}$, -$NR^{13}C(=O)N(R^{13})_2$, -$NR^{14}SO_2N(R^{13})_2$, -$NR^{14}SO_2R^{13a}$, -SO_3H, -SO_2R^{13a}, -SR^{13}, -$S(=O)R^{13a}$, -$SO_2N(R^{13})_2$, -$N(R^{13})_2$, -NHC(=NH)NHR^{13}, -$C(=NH)NHR^{13}$, =NOR^{13}, NO_2, -$C(=O)NHOR^{13}$, -$C(=O)NHNR^{13}R^{13a}$, =NOR^{13}, -$B(R^{34})(R^{35})$, -OCH_2CO_2H, 2-(1-morpholino)ethoxy, -$SC(=NH)NHR^{13}$, N_3, -$Si(CH_3)_3$, (C_1-C_5 alkyl)NHR^{16};

-(C_0-C_6 alkyl)X;



, where q is independently 0,1;

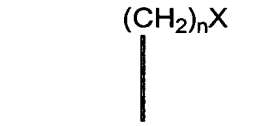


;

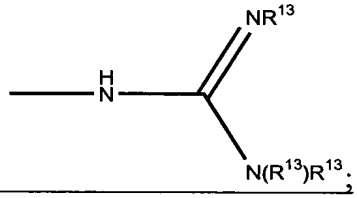
-(CH_2)m$S(O)p'(CH_2)_2X$, where m = 1,2 and p' = 0-2;

and

R^3 and R^4 may also be taken together to form



, where n = 0,1 and X is



;

R^3 and R^5 can alternatively be taken together to form -(CH2)t- or -CH2S(O)p'C(CH3)2-, where t = 2-4 and p' = 0-2; or

R^4 and R^5 can alternatively be taken together to form -(CH2)u-, where u = 2-5;

R^{16} is selected from:

an amine protecting group;

1-2 amino acids;

1-2 amino acids substituted with an amine protecting group;

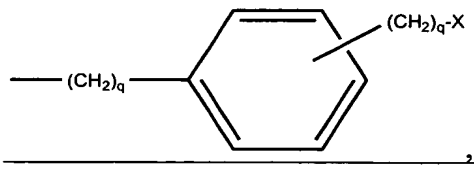
K is a D-isomer or L-isomer amino acid of structure

-N(R^6)CH(R^7)C(=O)-, wherein:

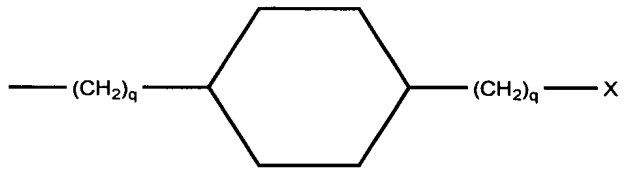
R^6 is H or C1-C8 alkyl;

R^7 is selected from:

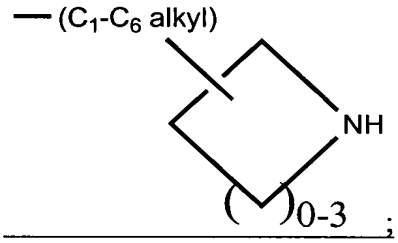
-(C1-C7 alkyl)X;



, wherein each q is independently 0-2 and substitution on the phenyl is at the 3 or 4 position;



, wherein each q is independently 0-2 and substitution on the cyclohexyl is at the 3 or 4 position;

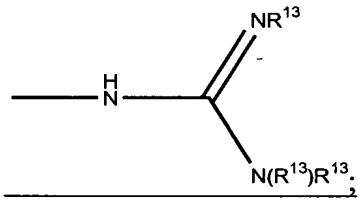


;

-(CH2)mO-(C1-C4 alkyl)-X, where m = 1 or 2;

-(CH2)mS(O)p'-(C1-C4 alkyl)-X, where m = 1 or 2 and p' = 0-2; and

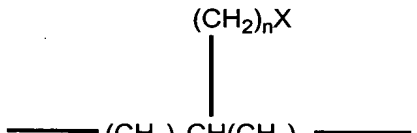
X is selected from:



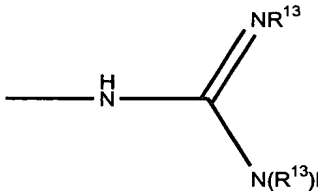
;

-N(R13)R13; -C(=NH)(NH2); -SC(=NH)-NH2; -NH-C(=NH)(NHCN); -NH-C(=NCN)(NH2); -NH-C(=N-OR13)(NH2);

R6 and R7 can alternatively be taken together to form

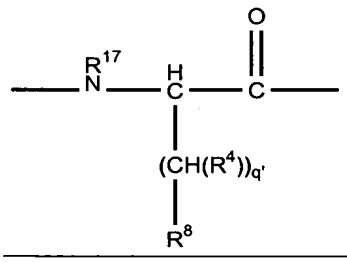


, wherein each q is independently 1 or 2 and wherein



n = 0 or 1 and X is -NH2 or ; L is -Y(CH2)vC(=O)-, wherein Y is NH and v = 1 or 2;

M is a D-isomer or L-isomer amino acid of structure



, wherein:

q' is 0-2;

R^{17} is H, C1-C3 alkyl;

R^8 is selected from:

$-CO_2R^{13}$, $-SO_3R^{13}$, $-SO_2NHR^{14}$, $-B(R^{34})(R^{35})$, $-NHSO_2CF_3$, $-CONHNHSO_2CF_3$, $-PO(OR^{13})_2$, $-PO(OR^{13})R^{13}$, -SO2NH-heteroaryl (said heteroaryl being 5-10-membered and having 1-4 heteroatoms selected independently from N, S, or O) , -SO2NH-heteroaryl (said heteroaryl being 5-10-membered and having 1-4 heteroatoms selected independently from N, S, or O), $-SO_2NHCOR^{13}$, $-CONHSO_2R^{13a}$, $-CH_2CONHSO_2R^{13a}$,

-$NHSO_2NHCOR^{13a}$, -$NHCONHSO_2R^{13a}$, -$SO_2NHCONHR^{13}$;

R^{34} and R^{35} are independently selected from:

-OH,

-F,

-$N(R^{13})_2$, or

C_1-C_8-alkoxy;

R^{34} and R^{35} can alternatively be taken together to form:

a cyclic boron ester where said chain or ring contains from 2 to 20 carbon atoms and, optionally, 1-4 heteroatoms independently selected from N, S, or O;

a divalent cyclic boron amide where said chain or ring contains from 2 to 20 carbon atoms and, optionally, 1-4 heteroatoms independently selected from N, S, or O;

a cyclic boron amide-ester where said chain or ring contains from 2 to 20 carbon atoms and, optionally, 1-4 heteroatoms independently selected from N, S, or O;

R^{32} is -C(=O)-;

n" and n' are independently 0-2;

R^1 and R^{22} are independently selected from the following groups:

hydrogen,

C_1-C_8 alkyl substituted with 0-2 R^{11};

C_2-C_8 alkenyl substituted with 0-2 R^{11};

C2-C8 alkynyl substituted with 0-2 R^{11};

C3-C10 cycloalkyl substituted with 0-2 R^{11};

aryl substituted with 0-2 R^{12};

a 5-10-membered heterocyclic ring system containing 1-4 heteroatoms independently selected from N, S, and O, said heterocyclic ring being substituted with 0-2 R^{12};

=O, F, Cl, Br, I, -CF_3, -CN, -CO_2R^{13}, -$C(=O)R^{13}$, -$C(=O)N(R^{13})_2$, -CHO, -CH_2OR^{13}, -$OC(=O)R^{13}$, -$OC(=O)OR^{13a}$, -OR^{13}, -$OC(=O)N(R^{13})_2$, -$NR^{13}C(=O)R^{13}$, -$NR^{14}C(=O)OR^{13a}$, -$NR^{13}C(=O)N(R^{13})_2$, -$NR^{14}SO_2N(R^{13})_2$, -$NR^{14}SO_2R^{13a}$, -SO_3H, -SO_2R^{13a}, -SR^{13}, -$S(=O)R^{13a}$, -$SO_2N(R^{13})_2$, -$N(R^{13})_2$, -$NHC(=NH)NHR^{13}$, -$C(=NH)NHR^{13}$, =NOR^{13}, NO_2, -$C(=O)NHOR^{13}$, -$C(=O)NHNR^{13}R^{13a}$, -OCH_2CO_2H, 2-(1-morpholino)ethoxy;

R^1 and R^{21} can alternatively join to form a 3-7 membered carbocyclic ring substituted with 0-2 R^{12};

when n' is 2, R^1 or R^{21} can alternatively be taken together with R^1 or R^{21} on an adjacent carbon atom to form a direct bond, thereby to form a double or triple bond between said carbon atoms;

R^{22} and R^{23} can alternatively join to form a 3-7 membered carbocyclic ring substituted with 0-2 R^{12};

when n" is 2, R^{22} or R^{23} can alternatively be taken together with R^{22} or R^{23} on an adjacent carbon atom to form a direct bond, thereby to form a double or triple bond between the adjacent carbon atoms;

R^1 and R^2, where R^{21} is H, can alternatively join to form a 5-8 membered carbocyclic ring substituted with 0-2 R^{12};

R^{11} is selected from one or more of the following:

=O, F, Cl, Br, I, $-CF_3$, -CN, $-CO_2R^{13}$, $-C(=O)R^{13}$, $-C(=O)N(R^{13})_2$, -CHO, $-CH_2OR^{13}$, $-OC(=O)R^{13}$, $-OC(=O)OR^{13a}$, $-OR^{13}$, $-OC(=O)N(R^{13})_2$, $-NR^{13}C(=O)R^{13}$, $-NR^{14}C(=O)OR^{13a}$, $-NR^{13}C(=O)N(R^{13})_2$, $-NR^{14}SO_2N(R^{13})_2$, $-NR^{14}SO_2R^{13a}$, $-SO_3H$, $-SO_2R^{13a}$, $-SR^{13}$, $-S(=O)R^{13a}$, $-SO_2N(R^{13})_2$, $-N(R^{13})_2$, $-NHC(=NH)NHR^{13}$, $-C(=NH)NHR^{13}$, $=NOR^{13}$, NO_2, $-C(=O)NHOR^{13}$, $-C(=O)NHNR^{13}R^{13a}$, $-OCH_2CO_2H$, 2-(1-morpholino)ethoxy,

C_1-C_5 alkyl, C_2-C_4 alkenyl, C_3-C_6 cycloalkyl, C_3-C_6 cycloalkylmethyl, C_2-C_6 alkoxyalkyl, C_3-C_6 cycloalkoxy, C_1-C_4 alkyl (alkyl being substituted with 1-5 groups selected independently from: $-NR^{13}R^{14}$, $-CF_3$, NO_2, $-SO_2R^{13a}$, or $-S(=O)R^{13a}$),

aryl substituted with 0-2 R^{12},

a 5-10-membered heterocyclic ring system containing 1-4 heteroatoms independently selected from N, S, and O, said heterocyclic ring being substituted with 0-2 R^{12};

R^{12} is selected from one or more of the following:

phenyl, benzyl, phenethyl, phenoxy, benzyloxy, halogen, hydroxy, nitro, cyano, C1-C5 alkyl, C3-C6 cycloalkyl, C3-C6 cycloalkylmethyl, C7-C10 arylalkyl, C1-C5 alkoxy, $-CO_2R^{13}$, $-C(=O)NHOR^{13a}$, $-C(=O)NHN(R^{13})_2$, $=NOR^{13}$, $-B(R^{34})(R^{35})$, C3-C6 cycloalkoxy, $-OC(=O)R^{13}$, $-C(=O)R^{13}$, $-OC(=O)OR^{13a}$, $-OR^{13}$, -(C1-C4 alkyl)-OR^{13}, $-N(R^{13})_2$, $-OC(=O)N(R^{13})_2$, $-NR^{13}C(=O)R^{13}$, $-NR^{13}C(=O)OR^{13a}$, $-NR^{13}C(=O)N(R^{13})_2$, $-NR^{13}SO_2N(R^{13})_2$, $-NR^{13}SO_2R^{13a}$, $-SO_3H$, $-SO_2R^{13a}$, $-S(=O)R^{13a}$, $-SR^{13}$, $-SO_2N(R^{13})_2$, C2-C6 alkoxyalkyl, methylenedioxy, ethylenedioxy, C1-C4 haloalkyl, C1-C4 haloalkoxy, C1-C4 alkylcarbonyloxy, C1-C4 alkylcarbonyl, C1-C4 alkylcarbonylamino, $-OCH_2CO_2H$, 2-(1-morpholino)ethoxy, C1-C4 alkyl (alkyl being substituted with $-N(R^{13})_2$, $-CF_3$, NO_2, or $-S(=O)R^{13a}$);

R^{13} is selected independently from: H, C1-C10 alkyl, C3-C10 cycloalkyl, C4-C12 alkylcycloalkyl, aryl, -(C1-C10 alkyl)aryl, or C3-C10 alkoxyalkyl;

R^{13a} is C1-C10 alkyl, C3-C10 cycloalkyl, C4-C12 alkylcycloalkyl, aryl, -(C1-C10 alkyl)aryl, or C3-C10 alkoxyalkyl;

when two R^{13} groups are bonded to a single N, said R^{13} groups may alternatively be taken together to form $-(CH_2)_{2\text{-}5}-$ or $-(CH_2)O(CH_2)-$;

R^{14} is OH, H, C_1-C_4 alkyl, or benzyl;

R^{21} and R^{23} are independently selected from:

hydrogen;

C_1-C_4 alkyl, optionally substituted with 1-6 halogen; and

benzyl; and

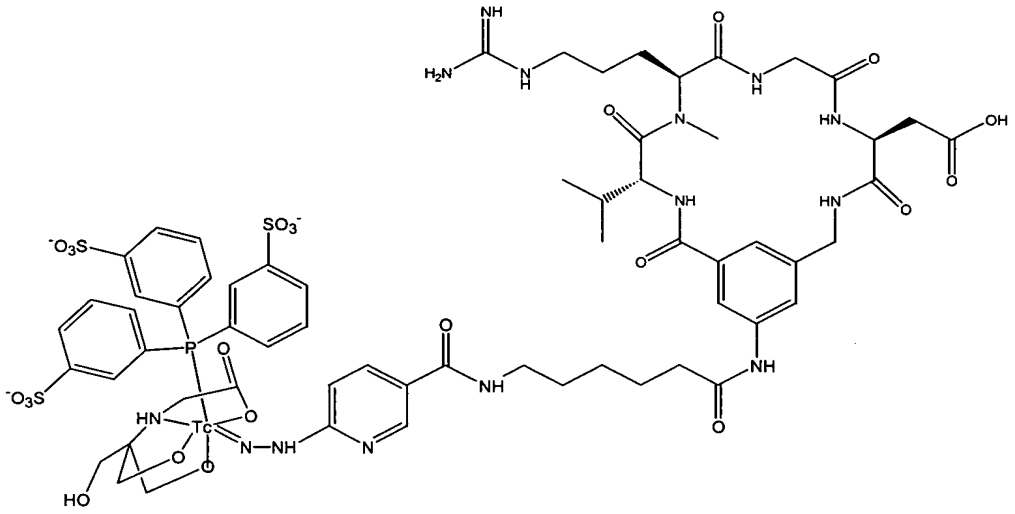
R^2 is H or C_1-C_8 alkyl.

21. (previously added) The method of Claim 20 wherein M_T is selected from the group consisting of: technetium-99m, rhenium-186, and rhenium-188.

22. (canceled)

23. (canceled)

24. (previously added) The method of Claim 20 wherein the localization step comprises the step of localizing a compound of the formula (IV) at the pulmonary embolus:



(IV).

25. (canceled)

26. (canceled)

27. (currently amended) The method of Claim [[26]] 20 wherein the acquisition step comprises the step of acquiring single photon emission computed tomography images of the pulmonary embolus.

28. (currently amended) The method of Claim [[17]] 20 wherein the acquisition step comprises the step of acquiring transaxial image slices and further comprising the step of reformatting the transaxial image slices into image slices that are parallel to a long axis associated with the pulmonary embolus.

29. (currently amended) The method of Claim [[17]] 20 comprising the step of displaying the two dimensional array as a reprojected image.

30. (currently amended) The method of Claim [[17]] 20 wherein the scanning step is performed at a series of angles.

31. (previously added) The method of Claim 30 wherein the assignment step is

performed at each of the series of angles.

32. (previously added) The method of Claim 31 comprising the step of sequentially displaying the two-dimensional arrays as reprojected images.

33-54. (canceled)

55. (previously added) The method of Claim 20 comprising the step of displaying the two-dimensional array as a reprojected image.

56. (previously added) The method of Claim 20 wherein the scanning step is performed at a series of angles.

57. (previously added) The method of Claim 56 wherein the assignment step is performed at each of the series of angles.

58. (previously added) The method of Claim 57 comprising the step of sequentially displaying the two-dimensional arrays as reprojected images.